City of Carmel Utilities

3450 W. 131st. Street
Carmel, In. 46074

317-733-2855
Fax: 317-733-2053

CITY of CARMEL WATER DISTRIBUTION
3"thru 8" INSIDE COMPOUND METER SETS

1. All new commercial buildings are required Back flow Devices.
2. All new businesses relocating in existing commercial buildings are required backflow devices within 30 days.
3. Devices shall be of the type approved by Indiana Department of Environmental Management.
4. Depending on the degree of hazard, the Water Distribution Department will decide if you need a Double Check or a Reduced Pressure backflow device.
5. The device must be tested at the time of installation by a State Certified Backflow tester and at the correct intervals for the type of device.
6. Test results are to be sent to: Carmel Utilities 3450 W.131ST ST., Carmel, IN. 46074.
7. **Any inside set that is below Ground Level must have a conduit ran to locate our Radio Transmitter at ground level or on an Outside Wall.**

INSTALLATION INSTRUCTIONS

All TRU/FLO Compound meters operate more accurately and reliably if installed properly. TRU/FLO Compound meter performance is directly related to the flow conditions of the water stream entering the meter. If the flow conditions are distorted as a result of upstream fittings or piping changes, the TRU/FLO Compound meter performance can be adversely affected.

For example, a properly installed meter with a length of straight pipe equal to 8 to 10 diameters immediately upstream of the inlet would register at 100%. The same meter installed with an elbow fitting immediately upstream of the meter will cause distortions in the flow stream conditions which would make meter performance highly erratic.

Neptune recommends that all TRU/FLO Compound meters be installed with a plate strainer at the meter inlet. The strainer, in addition to protecting the meter from debris in the line, also corrects the velocity profile of the flow to the meter.

When installing Neptune meters with a strainer, a minimum of four (4) pipe diameters of straight run pipe (can include components that are fully open in their normal operating position) is required upstream and downstream of the meter/strainer assembly.

If a Neptune meter is installed without a strainer, a minimum of eight (8) to ten (10) pipe diameters of straight run pipe (can include components that are fully open in their normal operating position) is required upstream of the meter/strainer assembly. A minimum of four (4) pipe diameters of straight run pipe is required downstream of the meter/strainer assembly.

When installing a TRU/FLO Compound meter, the recommended installation instructions should be followed.

RECOMMENDED INSTALLATION

The recommended installation of a TRU/FLO Compound meter is shown in Figure 2.1. This installation incorporates a plate-type strainer attached to the inlet of the meter. This illustration also shows an optical bypass which provides uninterrupted service capability during periods of meter service.

As indicated previously, the upstream plate-type strainer provides protection against meter damage from debris in the lines and virtually eliminates the effects of variations in upstream piping. Use of a Neptune strainer of the same line size as the meter is specifically recommended. This strainer design provides optimum velocity profile correction at minimum additional head loss.

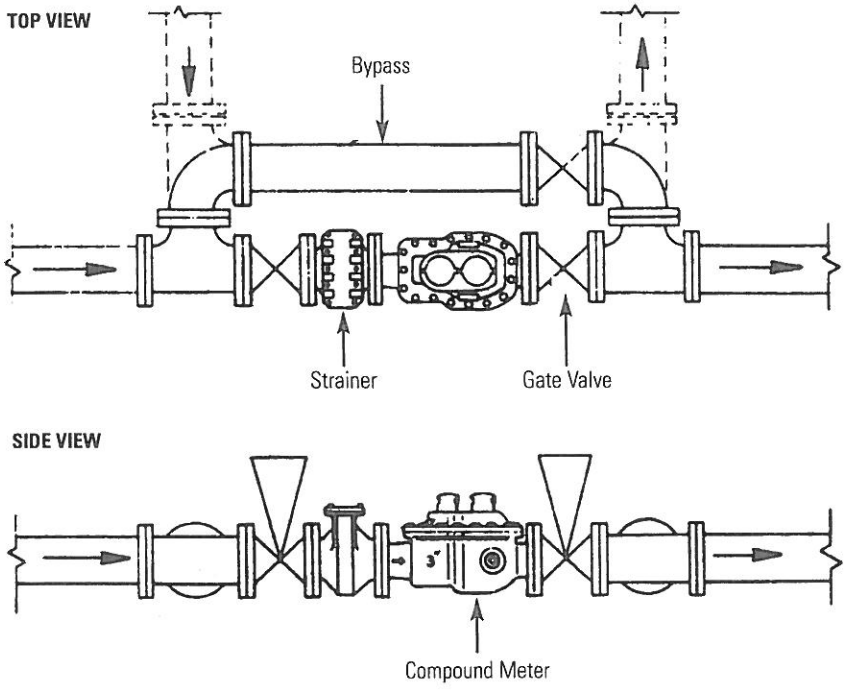


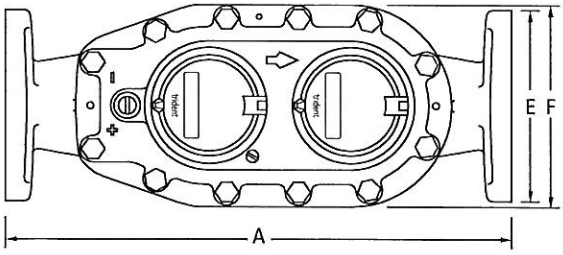
FIGURE 2.1 TRU/FLO COMPOUND TOP AND SIDE VIEW

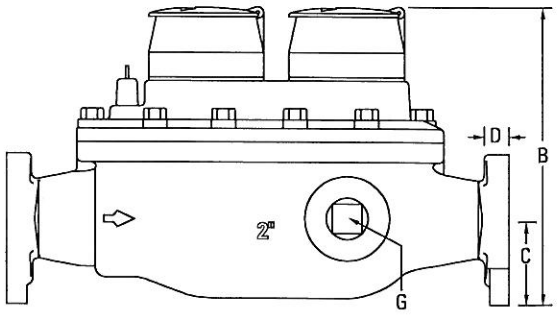
OPERATING CHARACTERISTICS

Meter Size	Normal Operating Range @100% Accuracy (±1.5%)	AWWA Standard	Low Flow @ 95% Accuracy
2"	½ to 200 US gpm 0.11 to 45.4 m³/h	1 to 160 US gpm .227 to 36.34 m³/h	⅛ US gpm 0.03 m³/h
3"	½ to 450 US gpm 0.11 to 102.2 m³/h	2 to 350 US gpm .454 to 79.5 m³/h	⅛ US gpm 0.03 m³/h
4"	1 to 1000 US gpm 0.23 to 227.1 m³/h	3 to 600 US gpm .68 to 136.3 m³/h	½ US gpm 0.11 m³/h
6"	1 ½ to 2000 US gpm 0.34 to 454.2 m³/h	5 to 1350 US gpm 1.14 to 306.6 m³/h	¾ US gpm 0.17 m³/h
6" x 8"	1 ½ to 2000 US gpm 0.34 to 454.2 m³/h	16 to 1600 US gpm 3.63 to 363.4 m³/h	¾ US gpm 0.17 m³/h

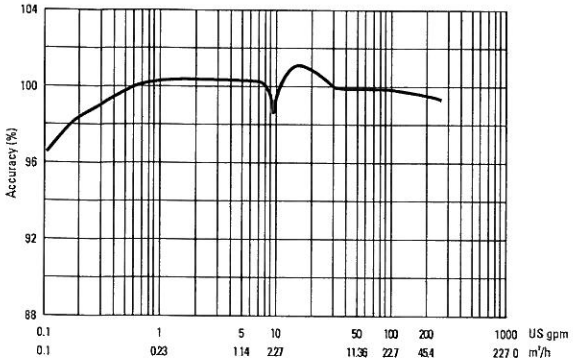
DIMENSIONS

Meter Size	A in/mm	B-Std in/mm	B-PRO in/mm	B-E-Coder) R900*i*™ in/mm	C in/mm	D in/mm	E in/mm	F in/mm	G in/mm	Flange Type	Weight lbs/kg
2" HP	15 ¼ 387	8 ⅝ 219	9 229	12 ⅛ 308	2 ½ 64	13/16 21	5 ⅞ 149	6 152	1 ½ NPT 38	2" Oval 150 lb	32 14.5
3"	17 432	10 ½ 267	11 279	14 ¼ 362	3 ¾ 95	⅝ 16	7 ½ 191	8 ½ 216	1 ½ NPT 38	3" ANSI 150 lb	72 32.7
4"	20 508	12 ½ 318	13 330	16 ¼ 413	4 ½ 114	11/16 17	9 229	9 ⅛ 232	2 NPT 51	4" ANSI 150 lb	100 45.4
6"	24 610	15 ¾ 400	16 ¼ 413	19 ½ 495	5 ½ 140	1 25	11 279	12 ¾ 324	2 NPT 51	6" ANSI 150 lb	208 94.3
6" x 8"	55 ⅜ 1407	15 ¾ 400	16 ¼ 413	19 ½ 495	5 ½ 140	1 25	11 279	12 ¾ 232	2 NPT 51	8" ANSI 150 lb	460 208.50

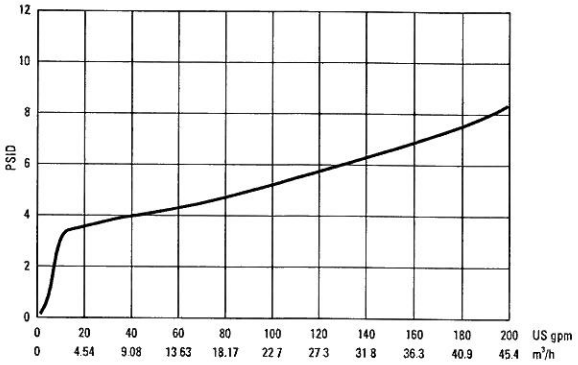




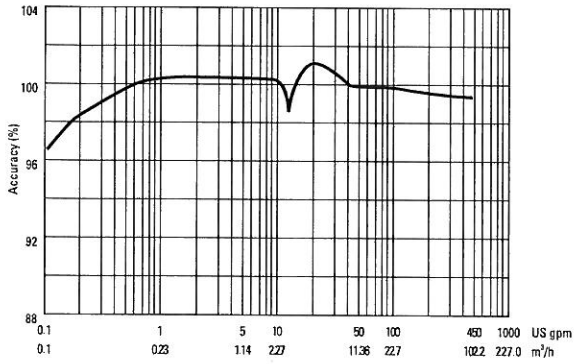
2" ACCURACY



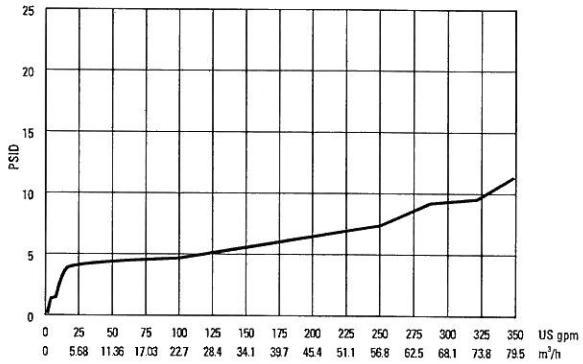
2" PRESSURE LOSS



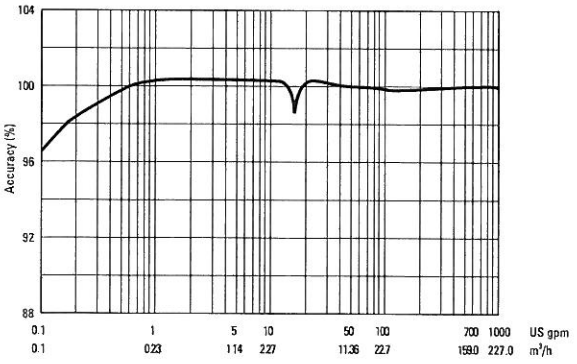
3" ACCURACY



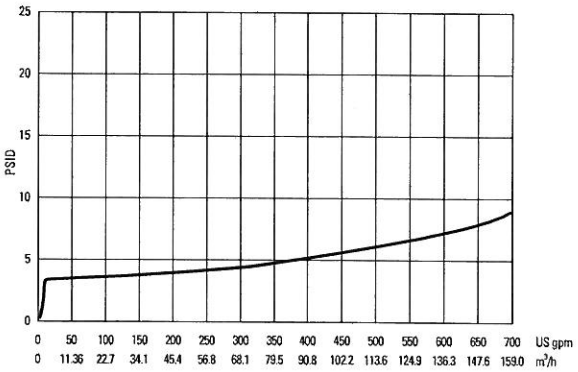
3" PRESSURE LOSS



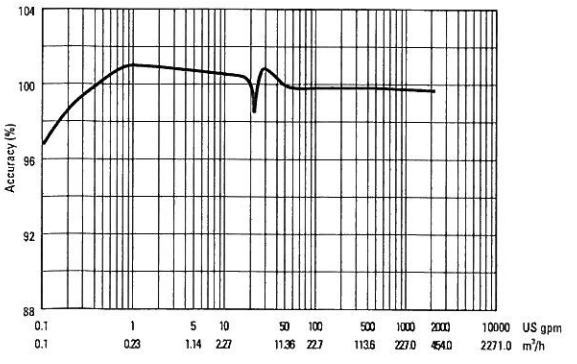
4" ACCURACY



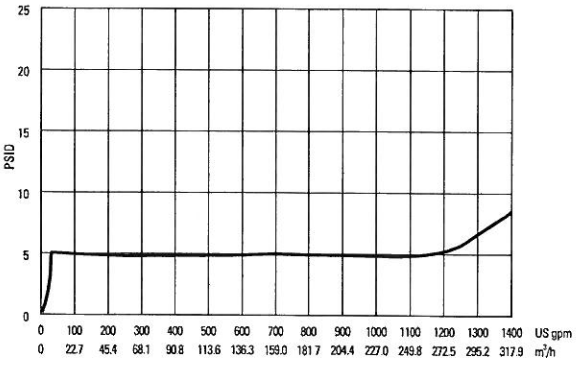
4" PRESSURE LOSS



6" ACCURACY



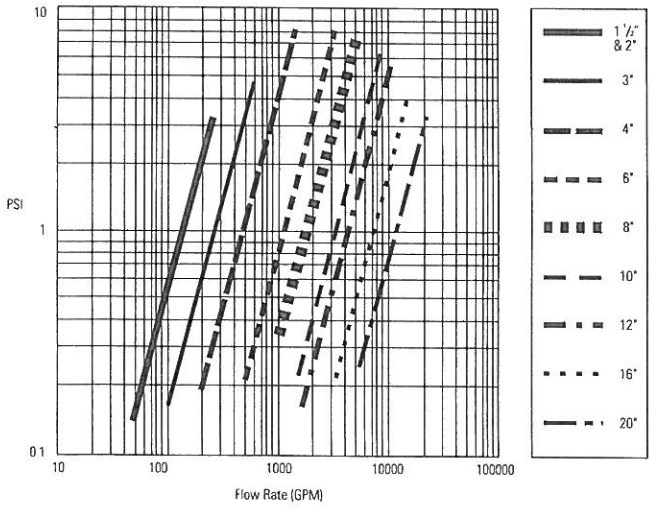
6" PRESSURE LOSS



DIMENSIONS:

Meter Size	A in/mm	B in/mm	C in/mm	D in/mm	E in/mm	F in/mm	No. of Holes	Hole Dia. in/mm	Weight lbs/ kg
1 ½"	7 178	6 152	5 ¼ 133	2 ⅛ 54	4 ½ 114	¾ 19	2	¾ 19	15 6.8
2"	7 178	6 152	5 ¼ 133	2 ⅛ 54	4 ½ 114	¾ 19	2	¾ 19	15 6.8
3"	6 152	8 ½ 216	8 ¾ 222	3 ¾ 95	6 152	⅝ 16	4	¾ 19	30 13.6
4"	7 ½ 191	9 ¾ 248	10 ½ 267	4 ½ 114	7 ½ 191	11/16 17	8	¾ 19	42 19.0
6"	9 229	11 ¾ 298	11 ½ 292	5 ½ 140	9 ½ 241	⅞ 22	8	⅞ 22	70 31.8
8"	10 254	14 356	13 ½ 343	6 ¾ 171	11 ¾ 298	1 ⅛ 29	8	⅞ 22	120 54.5
10"	15 381	18 ¼ 464	18 ¼ 464	8 203	14 ¼ 362	1 3/16 30	12	1 25	195 88.4
12"	16 ⅞ 429	18 ⅞ 479	20 ½ 521	9 ½ 241	17 432	13/16 21	12	1 25	180 81.6
16"	25 ¼ 641	28 711	20 ¾ 527	11 ¾ 299	21 ¼ 540	1 25	16	1 ¼ 29	240 108.8
20"	18 ⅝ 473	28 711	26 ⅛ 664	13 ¾ 349	25 635	1 ⅛ 29	20	1 ¼ 29	300 136.0

PRESSURE LOSS



- 1½" 53145-100 Lead free, Rilsan nylon-coated ductile iron
- 2" 53120-600 Lead free, Rilsan nylon-coated ductile iron
- 3" 53107-600 Lead free, Rilsan nylon-coated ductile iron
- 4" 53107-700 Lead free, Rilsan nylon-coated ductile iron
- 6" 52000-601 Lead free, Rilsan nylon-coated ductile iron
- 8" 52000-704 Lead free, Rilsan nylon-coated ductile iron
- 10" 52000-802 Lead free, Rilsan nylon-coated ductile iron
- 12" 9276-000 Steel
- 16" 9276-100 Steel
- 20" 9276-200 Steel